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Original Communications.

CASES OF TRANSPLANTATION OF SKIN AT THE BOSTON CITY HOSPITAL.

Reported by Messrs. BELT, HANDY and BOLLES, House Surgeons.

CASE I.—(Service of Dr. INGALLS.)—B. K., æt. 36, domestic, entered the hospital Aug. 5th, 1870, for an old recurring ulcer of the leg, measuring two by three inches. In part of its surface deep, offensive and irregular. She was ordered a wash of soda chlorinata (℥iij. ad Oi.), under which she steadily improved.

Aug. 14th.—A portion of healthy epidermis was removed from the inner aspect of thigh and placed within the ulcer at three different places, each piece as large as a millet seed, "with the idea of giving the ulcer several points to heal from and thereby hasten its closure."

On the 17th, after the removal of the plaster for the first time, no islets were seen, after which no mention was made of the transplantation, but the leg took on a healthy action, and healed very rapidly, *growing from several centres*, and, on the 26th, patient was discharged, well.

CASE II.—(Service of Dr. FIFIELD.)—A. C., female, æt. 20, entered June 3d, 1870, with a large, foul and deep syphilitic ulcer of left leg, five by six inches; in the middle, the tibia was exposed for nearly two inches. From time of entrance until the middle of October, almost every kind of local and constitutional treatment had been tried, and the ulcer had become stationary at about one half its first size. Several large and very many small pieces of bone had exfoliated.

At this time the tibia was cut down upon, and dead bone removed; the ulcer was treated still further for a week, and again remained stationary.

Oct. 25th.—Several pieces of skin, each as large as a rice grain, were transplanted to the surface of the ulcer and covered with plaster.

Nov. 15th.—Nothing could be seen of the pieces, but the ulcer had contracted considerably. Six new pieces of skin were then inserted in little cuts made in the granulations. Three days after, nothing seen of these.

20th.—Ten more transplantations.

23d.—Six more, two of which were taken from nurse.

25th.—Several bits of reproduced skin are seen in place of earlier transplantations (those of Nov. 15th). Those of the 20th are all adherent, but the epidermis is peeling off from the true skin and falling away. The remaining portion of the transplanted skin is whitish or bluish, and firmly adherent.

26th.—All the last pieces are also adherent. Five more put on.

Dec. 1st.—A bridge, three quarters of an inch long, has formed across the lower corner of ulcer by three pieces of skin which have extended and met, and another, one and a half inch in length, across another angle, is almost completed by three more. Nineteen pieces can now be counted, all growing, and a portion of which have also retained their epidermis. The larger islands now are circular, more than one fourth inch in diameter, consisting of the original skin and a broad, white border of new growth. They amount in all to one third of the area of the ulcer, which is triangular, and two and a quarter inches from corner to corner.

CASE III.—(Service of Dr. INGALLS.)—M. C., æt. 28, domestic, entered hospital Oct. 28th, 1870, with an old recurring ulcer on the inner aspect of the right leg and one inch above the malleolus. It was three inches by two inches in diameter, deep, and with an inflamed base, sharp edges, and surrounded by a halo of bluish tissue. The veins of the leg were varicose. Water dressing was applied.

Nov. 3d.—The ulcer has lost its inflamed base and sharp edges. Three pieces of skin, the size of canary seeds, were taken from the inner aspect of arm and placed upon the surface of the ulcer, and the water dressing re-applied.

Nov. 14th.—The ulcer is contracting.

Two of the pieces of skin planted have taken root and are spreading over surface of the ulcer, one being the size of a pea.

18th.—One of the pieces planted has extended across the ulcer and united with both edges, and laterally for two thirds of an inch. The other has united with the edge of the ulcer, and is about the size of a buck-shot. The growth of the bits of skin and the contraction of the edges have nearly healed the ulcer.

26th.—Ulcer well. The largest piece of skin grew to the size of a five-cent nickel coin; the smaller, to that of a three-cent silver piece.

Case IV.—(Service of Dr. Fifield.)—I. V., æt. 12, male, entered Oct. 21st, 1870. Suffered great loss of skin of right arm by sloughing after an injury, leaving an ulcer extending around the limb and nearly six inches vertically.

Nov. 16th.—Two small pieces of skin were removed from the leg and put into cuts in the granulations.

20th.—No adhesion. Nine pieces laid on to-day and covered with isinglass plaster.

24th.—Six more pieces, each divided into two. Those of the 20th appear to have come away.

Dec. 1st.—No success thus far. The granulations in this case have been rather flabby from the first.

Case V.—(Service of Dr. Fifield.)—D. F., æt. 31, male, entered Oct. 24th, 1870, for a recurring, deep, varicose ulcer one and a half inch in diameter. Dressed at first with wet strapping, according to the "Chapman method."

Nov. 22d.—Ulcer now three fourths of an inch by one inch. Four bits of skin laid in a square, half an inch apart, on its surface.

30th.—All the pieces adhered and have met each other. The edges of the ulcer have also reached the skin transplanted. There only remains to heal a minute spot in the centre of the "square." The epidermis in this case did not come off.

Dec. 4th.—Entirely well.

THE AGUE THEORY.

By John W. Weir, M.D., Edwardsville, Ill.

I read with much interest, in the Journal of January 14th, 1869, a review, or criticism, by Dr. H. W. Harkness, of Sacramento, Cal., on Dr. Salisbury's theory of the cause of fever and ague. Dr. H. says: "A small vegetable spore of Palmella, one five-thousandth of an inch in diameter, was dragged to the light of day, and the culprit put upon his trial. A few suspicious circumstances connected with the development and growth of the criminal were brought forward as proofs, and cleverly analyzed, and the little atom was declared guilty of having been the cause of half the ills of human life."

Dr. H. very "cleverly" criticizes the theory of Dr. S., but in the sequel leaves the subject still further in the dark, by suggesting that the "culprit" may be a subtle ether in the atmosphere. He tacitly falls into the miasma theory. The truth is, I believe, that all members of the profession, who have written on the subject, have either advocated or adopted the miasma theory, or failed to say anything respecting it; and it has thus become the settled theory for the past fifty years.

I think it is well for the human, and animal creation, that, although this little spore was "dragged to the light of day, and condemned," it has thus far escaped execution. For I think that which has been thought to produce "half the ills of human life," is a vital ingredient of our atmosphere, and as essential therein as oxygen, hydrogen, carbon, or nitrogen.

When I was reading medicine with Dr. Kendall Davis, of Reading, Mass., in 1834, I observed the mercury, in the thermometer in my room, rose and fell only 5° from the warmest part of the day to the coolest part of the night. This surprised me, for I was aware that in Kentucky, where I had formerly lived, the rise and fall was from 20° to 30°. My attention was particularly called to the fact on a hot day in August, when I found the thermometer to register 80°; having occasion to be in the open air during the night, I found many of the large stones still retaining the heat which had been given them by the sun during the day, and in turn they gave it off to the surrounding air, and thus maintained it at a temperature only 5° less than it had during the day. I believe I learned from this circumstance the cause of chills and fever. The Northeastern States are so studded with stones that, during the warm season, they become heated during the day, and keep the air comparatively warm and dry during the night, and, in the cold season, become as icebergs at night, and keep the days cold. They act as equalizers, summer and winter, and hence there is but little difference in the temperature of day and night.

During a constant practice in this malarious region, I have seen no reason to change the opinion I formed in Reading,

thirty-six years ago, that chills (intermittent fever, or fever and ague) owe their origin to sudden transitions from heat to cold, or from a dry, heated atmosphere during the day, to a cold, damp one at night. I will venture to say, without fear of successful refutation, that there is no region of country, in the temperate zones, where there is a rich alluvial soil, unprovided with stone, where there are not chills and fever. The damp, cold exhalations from the earth after sundown, and after the exhausting heat of a summer or autumn day, are too great a tax on the human system, unless it is very vigorous, or well protected by nourishment and clothing for the sudden change.

My experience is, that the poorly fed and poorly clad are those who suffer most from chills and fever. The mercury here will indicate, in our warmest days in July and August, from 100° to 105°, and during the night falls to 70°, and then, without any indication of decomposed vegetable matter, chills will set in. In 1869, during the months of July and August, in the warmest part of the day, the mercury marked from 100° to 105° in the shade, almost every day during those two months, and on the first of September the weather became suddenly cold, and in forty-eight hours from that time, the mercury fell to 45°, a change of 60° in two days; and it continued cold for ten or twelve days. For the past two months, but very little rain had fallen, and no decomposition of vegetable matter had taken place. I predicted, when it turned so cold, that the whole country would be afflicted with chills; and I never saw so large a proportion of persons having chills, as during the following two months. The weather had been very warm and exhausting during the hot months, causing a relaxed condition of the system; the sudden change to cold drained the body of caloric, which the vital powers could not restore, and, as a consequence, attacks of fever and ague were very frequent.

Dr. Harkness mentions the extensive marshes in California, where, he says:—"The farmers living on and contiguous to these borders, have long since learned that the ague prevails to a great extent along this shore line, and also for a considerable distance inland from its margin, but a residence in the centre is safe." Now how can we account for this? why is the centre of the marsh healthy?

To my mind it is very clear. During the winter and spring, water stands in the marsh, and through the summer it is found very near the surface, and so maintains a constant cool and damp atmosphere. On the shore, on the contrary, and for some distance inland, the temperature is raised by the sun to a considerable height during the day, but at night it is suddenly lowered, by the absence of the sun and the exhalations from the marsh, nearly to that of the marsh itself.

Dr. Salisbury, in one of his searches for the ague plant, placed boxes of moist earth, supposed to contain ague poison, in the open window of the bedroom of two young men, and, it seems, gave them the ague. So would boxes of any moist earth, or boxes of ice, have filled the chamber with cold, damp air, and produced the same effect. The temperature will be as high in a grove of timber, of a summer day, as on the high prairie, yet at night will be four or five degrees lower, and ague is much more common in timber than in prairie. An embankment of earth thrown up will lower the temperature at night several degrees, and subject those living near to ague. On all newly made farms in the west, ague prevails until cultivation dries the surface and stops damp exhalations at night.

The philosophy of chills and fever, as I have understood the subject for many years, is this: A person exerts himself during a warm day; a cold wind comes on, or nightfall, while he is in a profuse perspiration, and without nourishing food, or additional clothing, he loses a large supply of animal heat. This is repeated daily for a time; the extremities of the exposed person become cold, he loses vitality, his heart beats feebly, and he sinks into a chill; he is *really dying*, and if there is not vital power enough left, death ensues; if life continues, however, a series of phenomena take place, which, by appropriate treatment, may result in recovery.

I have not believed for thirty years, nor do I now believe, that intermittent fever is produced by any miasmatic poison, but is the result of sudden and repeated draughts of animal heat from the system, which feeble persons can prevent only by suitable clothing, nourishment and tonics.

My theory and experience of the treatment of chills and fever differ as much from the general theory, as does my opinion of its cause. Quinine is, no doubt, the most direct agent we have yet found to break up chills, but I deny that it contains any tonic properties. You may stop chills with quinine, but they will return again,

so sure as the system is not fortified by management or tonics, by medicine other than quinine.

CASE OF TRAUMATIC TETANUS TREATED BY MEANS OF THE CALABAR BEAN.

By Walter E. Anthony, M.D., of Providence, R. I.

George J. B., an engineer, 32 years old, was standing beside a steam fire engine, at 1 o'clock, A.M., Tuesday, September 19th, when the boiler exploded. He was thrown violently to the ground, the machine falling partially on him. I saw him twenty minutes after the accident, and found, upon examination, a compound comminuted fracture of the right arm at the upper third; a fracture of two ribs on the right side, and several cuts about the head and face.

He was removed to his home, and his wounds dressed. It was found that the fracture of the arm was in an oblique direction, involving the whole attachment of the pectoralis major, which, acting upon the upper fragment, tended to draw it in toward the body, thus rendering it very difficult to keep in position. The arm was put up in a tin splint, made to fit it, and extension applied by means of a weight attached at the elbow.

Until Saturday night, five days, he was unable to pass water, and was obliged to have a catheter introduced twice a day. His bowels were moved by means of injections. Saturday night, he passed his water without assistance, and continued to do so. His pulse, which, on the morning of the accident, was 104, had gradually sunk to 70, where it remained until Friday, the 30th, eleven days after the accident. Friday morning, he began to complain of stiffness of the jaw, which continued slightly until night. About 12 o'clock, it began to increase, so that by morning deglutition was almost impossible. Gave him calabar bean, fl. ext., ♏ v., repeated once in two hours, which was increased, in the morning, to ♏ x.

At 12 o'clock, as he was unable to swallow, I ordered injections of beef tea with brandy to be given, and repeated in four hours. Jaws were firmly set.

Gave hypodermic injection of morph. sulph. ¼ grain. 10, P.M.—Increased the dose of calabar bean to ♏ xx.; saw no effect at all from the use of it. Water passed involuntarily.

Sunday, Oct. 1st, 7, A.M.—Patient able to converse, could swallow with difficulty, gradually grew worse from 8 o'clock. At 10 o'clock, he had opisthotonos, and spasms of the diaphragm. He retained his senses until about 12 o'clock. He died at 2 o'clock, P.M. His jaws were firmly set, and the muscles of the abdomen were rigid.

Autopsy, eighteen hours after death.—I was allowed to make an examination of the arm only. I found considerable infiltration of blood. The fracture was oblique, extending from the outer portion of the head of the humerus downward. The upper fragment measured three and a half inches in length.

The bone was comminuted. No lesion of the nerves could be discovered.

During the progress of the disease, the calabar bean was used without any apparent effect.

The preparation used was the German fluid extract, procured from Theo. Metcalf & Co., Boston. The dose set down in the Pharmacopœia is five minims. This was increased to twenty, without any effect. The injections of sulphate of morphia relaxed the spasms for a short time, but they constantly returned with greater severity.

A CASE OF ECTOPIA CORDIS.

By Dr. Neumann Schlessinger. Translated from the Proceedings of the Berlin Medical Society, by Henry Tuck, M.D., Boston.

The anterior displacement of the heart entirely outside of the walls of the thorax, without any complication or other deformity, is very rare. I have found only six cases of this sort on record. The first, observed by Martinez in Madrid in 1706; the second, by Büttner in Königsberg in 1745; the other four by Sandifort, Haan, Albers, Monod and Cruveilhier.

Ectopia cordis in connection with other deformities, such as extrusion from the body of some one or more of the abdominal organs, has been much oftener reported.

The rare case here reported is uncomplicated ectopia cordis.

The child to which this heart belonged, and which I showed this Society at its last meeting, was born March 3d, 1870, of a healthy mother 24 years of age. I saw the child ten minutes after its birth. The child was well developed, and, when first born, made three or four gasping inspirations, but when I saw it had ceased to breathe.

The heart lay entirely free upon the centre of the sternum, horizontally across the body, its base towards the left and its somewhat rounded apex towards the right. It had no pericardium. Upon the heart, not

far from its apex, was a short, reddish-white projection, eight millimetres (one third of an inch) in length. The heart was in active contraction. At first there were 64 contractions in a minute; after half an hour there were 18, and in an hour and a quarter they had entirely ceased. The systole always began with the contraction of the auricles; then the contraction of the ventricles followed, so that the end of the contraction of the auricles was synchronous with the beginning of the contraction of the ventricles. Before the ventricles were quite contracted the auricles relaxed, then the ventricles relaxed, and now both auricles and ventricles remained for a time dilating, always exactly repeating the same process. As regards the change in shape of the heart during contraction, there was also to be noticed, with the decrease of the diameter of the heart from side to side and increase of its length (as has been shown by vivisection in physiological experiments), a difference of length of the two ventricles; the left ventricle lengthened during the systole, while the right showed some shortening.

In answer to the question if there is any great value, physiologically, to cases of ectopia cordis, it must be freely admitted that the condition of the heart is not its normal one; but still the opportunity to observe the human heart directly while it is in action is not to be neglected. Martinez, Sandiford, Monod and Cruveilhier had this opportunity in their cases of ectopia cordis, but the latter only made any accurate report of his observations. Cruveilhier observed that the heart shortened its long diameter during contraction; while on the other hand Hering, in the case of a calf which lived with ectopia cordis ten days, reported it as lengthened. The cases seen by Harvay, Portal and Bamberger were those where, owing to abscess of the thorax, caries of the rib, or a wound, the heart could be seen or felt, but only partially. Other cases are recorded where, though the skin was entire, yet owing to fissure of the sternum, or some defect in the ribs, the heart's movements could be seen.

In the case seen by me, the difference in length during the systole of the right and left ventricles can be explained by the difference in the arrangement of the muscular fibres in the two ventricles. The circular and spiral fibres are much more numerous than the longitudinal fibres in both ventricles; but in both men and animals the right ventricle has a much larger proportion of longitudinal fibres than the left. I think that this was the case in the heart of this child. This could not have been determined without injuring the heart so much as to spoil it as a preparation, and it had already been given to the Pathological Institute. If I am correct in this opinion, then it follows that during the systole, owing to the preponderance of longitudinal fibres, the right ventricle shortens, but the left, owing to the preponderance of circular fibres, lengthens. It is not impossible, owing to the different arrangement of the fibres found in different hearts, that the change of form during the systole is not always the same. Finally, it is evident that the object in view, the emptying of the ventricles, is accomplished in either case, whether by circular pressure or by pressure longitudinally from base to apex.

This also explains the fact that in healthy persons there is found much difference as regards the place where the heart's impulse is felt, much greater than can be accounted for by variations in muscular development and adipose tissue.

The *post mortem*, made by Prof. Virchow, showed a patent foramen ovale and a defect in the septum ventriculorum. It is not probable, however, that these had any material effect on the action of the heart.

There were, besides, two venæ cavæ superiores, which as it is worth remark have always been found in cases of ectopia cordis where a careful examination has been made.

As regards the development of this abnormal condition of the heart, it must be remembered that, at a certain point in its development, the heart lies free and is not enclosed by the thorax. Later, the thorax and abdominal walls grow up from both sides, approach nearer and nearer together, and finally enclose the heart.

It is impossible to say with certainty, of course, that in this case some mechanical movement of the heart, before this closure of the thorax, threw it out of place, but still it is possible that the reddish-white projection, already mentioned, near the apex of the heart, a remnant of a fibrous band, may have held the heart firmly at some embryonic period of its development and prevented its being enclosed by the thorax.

Dr. J. J. Giltenan, of Cincinnati, sailed from New York, Nov. 16th, for France, to join the Anglo-American Ambulance Company.

Selected Papers.

ANTIDOTAL EFFECT OF CHLOROFORM ON STRYCHNINE.

By W. H. Gobrecht, Professor of Anatomy in the Medical College of Ohio.

Early in the morning of Thursday, December 5th, 1867, I was called to the Gibson House, Cincinnati, Ohio, to visit a young man, aged about 20 years, said to have been taken suddenly ill. I found the patient in a state of profound repose, so to speak, with regular but rather labored breathing, bordering on stertor; a pulse full and pretty regular, though not forcible; he was insensible; pinching or shouting was not appreciated; he was unable to swallow. In fact, on first examination, he appeared to be in just such a condition as one who had often seen the effects of opium in excess would have charged to that drug; so I remarked, "This man seems to have poisoned himself with laudanum or morphia; wait, however, until I have examined his pupils." The pupils were undoubtedly dilated, for I distinctly recollect having said, "It is *not* opium, but what it is I cannot at present certainly tell." My delay in reporting this case is due to not having made a memorandum at *that time* of the *precise* condition of the pupils (great accuracy being, in my opinion, essential in all exhibits for the benefit of the profession); yet I was then plainly satisfied, being familiar with opium symptoms, that no such narcotic had been employed.

I concluded to act on general principles. Internal stimulants could not be given, as the patient could not swallow, so I determined to keep up and increase respiration by the use of the electro-magnetic machine, until the unknown poison had been eliminated by the lungs. Just before leaving to obtain my machine, I, for the sake of his comfort, changed the position of the patient, who had been lying for several hours upon his back, to his side. In this movement his pillow was displaced, when a bottle, corked, containing a small quantity of fluid with a few shining crystals, rolled from beneath it. This fluid, on examination, appeared to be chloroform, yet there was no odor of it in the room. The Marshal of Kentucky, who had charge of the man under a requisition from the Governor of Ohio, then recollected that towards morning his prisoner had risen, examined his valise, and quietly returned to bed, where he had remained just as quietly until the time when the marshal, failing to awaken him, became alarmed and sent for aid.

On my way for the electro-magnetic machine, I left the vial with Mr. E. S. Wayne, chemist, desiring an immediate analysis of its contents. Shortly afterwards he informed me that the fluid submitted to him was a saturated solution of strychnia, with crystals in excess, in chloroform, and that if the bottle was originally full, it must have contained an ounce of chloroform with at least *fifteen* grains of strychnia. On again reaching the patient, perhaps in an hour or less after leaving him, he was in the same quiet condition, without a single strychnine symptom, though somewhat depressed and evidently anæsthetized, which state the analysis of the fluid seemed to throw some light upon. I immediately commenced to pass regularly-successive electro-magnetic currents (by Kidder's machine, with full power) from the nape of the neck to the pit of the stomach, in the ordinary manner for artificial respiration, which were continued more than an hour. During this time sensation and consciousness gradually returned; the patient then recognized those about him, and for some time slept, with brief intervals, tranquilly. On awaking, and during Friday, he had some general numbness. On Saturday, December 7th, 1867, very trifling numbness only and some exhaustion remaining, his father determined on removing him to his home in Kentucky. The trip is reported to have been attended by insensibility, lasting thirty-six hours. On February 11th, 1868, the father wrote me: "I do not know, but, judging from appearance, there is no trace of poison existing either in his mental or physical system."

The chemical analysis of Mr. Wayne and the observation of the marshal are fully sustained by the statement of the patient, who had no knowledge of the examination, or observation, for he, in answer to my inquiries, said that, supposing chloroform and strychnine were the most certain poisons, he had obtained from a druggist *friend* the bottle of chloroform and fifteen cents' worth of strychnine, to use in case of need. Being determined to destroy himself, he got out the preparation, and first *inhaled* all he could, but finding this did not produce the desired effect, *swallowed* all but that which was found in the bottle under the pillow.

It would thus appear that the patient had taken, before I saw him, seven-eighths of an ounce of a saturated solution of strychnia, with crystals in excess, in chloroform,

both by inhalation and ingestion, without any other result than complete and prolonged anæsthetization and some temporary subsequent numbness, with no known injurious consequences after two months had elapsed.

The case is reported as a contribution to toxicology, somewhat peculiar, as the *strychnine effects seem to have been destroyed from the beginning.* It is therefore, perhaps, more marked, as far as the antidotal property of chloroform is concerned, than those quoted in the *United States Dispensatory*, 12th edition, 1855, under "Strychnia," p. 1357, and in the foot-note to the same.*

In corroboration of the statement of Prof. Gobrecht, as to the effects of chloroform as an antidote in the case of supposed poisoning from strychnia, Dr. John L. Atlee, of Lancaster, related the following case:—

On Tuesday afternoon, about 2 o'clock, August 21st, 1857, I was requested to see Mr. A. C., aged about 60 years, a man of herculean frame and great muscular strength, who was found in his chamber at the hotel, laboring under violent spasms. This man had at one time occupied a highly respectable position in the community in which he lived, and belonged to one of the oldest and most respectable families in the county. For several years he had been suspected of harboring horse-thieves and burglars at his tavern in the country, but by his consummate tact and cunning had eluded the vigilance of his neighbors who suffered from the depredations of the outlaws. In the beginning of the year 1857, however, he was accused of receiving stolen property, and his trial was fixed for the April term of that year. It did not, however, take place until the following term, in August, when he was convicted of the offence. He was at dinner, at 1 o'clock, P.M., when he overheard the remark of a gentleman attending the court, that the jury had found him guilty. He immediately rose from the table, went to his chamber, was seen to mix something in a tumbler with water, and drink it, and not long afterwards was found in the condition subsequently described. Dr. Charles L. Baker, a very intelligent young physician, now deceased, then boarding at the hotel, was called in to see him. Finding his symptoms peculiar, and the patient altogether unwilling to take medicine, he sent for me.

Upon entering the room I found the patient in bed, lying upon his back, his countenance flushed, and with a stern and almost demoniac expression; his pulse natural, skin moist, and his intellectual faculties perfect. Dr. Baker informed me that he suspected poison, and had endeavored to administer emetics; but that the patient had obstinately refused all medical assistance. While receiving this information a violent spasm seized the patient, which I observed was of a decidedly tetanic character, similar to those previously observed, and which affected all the voluntary muscles. I told the doctor that I was satisfied the patient had taken strychnia. He had frequently declared, before his trial, that, if convicted, he would never suffer imprisonment.

Finding the patient obstinately bent on self-destruction, the use of the stomach-pump was suggested, and Dr. B. went to procure it. In his absence I used all my endeavors to induce the patient to take the emetic, without avail; and while pressing the cup to his lips I discovered that his jaws were firmly closed, that he had a full set of teeth, and that it would be impossible, in a man of his great muscular strength and determination, to use the stomach-pump. It then occurred to me that by means of chloroform a double object could be gained—a subjection of the patient and a relief from the spasms. I went next door to the druggist, where I found Dr. B. preparing the stomach pump, procured two ounces of chloroform, and with him returned to the patient, whom I had left in the care of a student.

While at the druggist's, I ascertained that at the April term of the court, when he had expected the trial to come on, the patient had purchased there twenty grains of strychnia. This confirmed my suspicion as to the cause of the symptoms, and showed the evident bent of his mind. On our return we found the spasms increased in force and frequency.

By means of a folded napkin the chloro-

* "And several cases are on record in which the inhalation of chloroform has not only afforded great relief, but appears to have been the means of saving life. Chloroform has been used also with seeming advantage by the stomach. In a case recorded by Dr. Dresbach, of Tiffin, Ohio, two drachms swallowed by a patient alarmingly ill from the effects of three grains of strychnia produced complete relief in less than fifteen minutes."

And also in a foot-note:—

"In a letter to the authors from Dr. Wm. D. Barclay, dated Muscatine, Iowa, May 4, 1863, the case of a robust young man is described, who, after taking four grains of strychnia, was seized with the most violent tetanic spasms, accompanied with intense suffering, and recovered under the use of chloroform, given both internally and by inhalation. It was necessary to keep him under the influence of the medicine for thirteen consecutive hours, during which two pounds of chloroform were consumed by inhalation. Two drops were given every five minutes by the stomach, when the mouth could be opened."

form was applied to the mouth and nostrils; but no sooner was it done than he grasped the napkin violently with his right hand, tore it away, and openly defied me to administer remedies to him. I then appealed to the gentlemen attending court, who by this time nearly filled the room, to assist us in holding down the patient, and by this means—having two persons to each arm and leg, and having the head firmly held—I was enabled to use the anæsthetic. In a few moments it produced its effect; his whole muscular system became relaxed, and he remained for ten or fifteen minutes perfectly quiescent. As soon as he was restored to consciousness, we found that a total change, mental, moral and physical, had taken place. The spasms had left him, the expression of his countenance was calm and comparatively pleasant, and he was perfectly obedient to every request made of him. He took the emetic without difficulty, and we soon had the satisfaction of seeing his stomach thoroughly evacuated. He had partaken of a portion of his dinner before swallowing the strychnia, which probably prevented a more rapid absorption of it. At this time, about 3 o'clock, P.M., I had to leave him, for three hours, under the care of Dr. B., with the understanding that he would re-administer the chloroform, should there be a recurrence of the spasms. At 6 o'clock, P.M., I found the patient apparently well; there had been no spasms; his mind was calm, his temper placid, and he complained of nothing but weakness. He had a good night, and the next morning, although suffering from muscular debility, and some unsteadiness in his gait, he was brought before the court, and sentenced to confinement in the Eastern Penitentiary, where, a few weeks afterwards, he committed suicide, by hanging, in his cell.—*Trans. Penn. State Med. Soc.*

EXPERIMENTAL RESEARCHES ON THE SPINAL CORD.

By MM. Masius and Vanlair.

The authors commence their memoir with a histological examination of the *filum terminale* of the spinal cord of the frog. At its posterior extremity this *filum* is exclusively formed of layers of epithelial cells, surrounded on the outside by the *pia mater*, and enclosing a canal which ends in a *cul-de-sac*. More in front they find, beyond the epithelial mass, some large multipolar cells, with nucleus and nucleolus (nerve cells) lying between the pia mater and the epithelium; still more anteriorly, they observe pale, varicose, and longitudinal nerve-fibres, the existencee of which Kölliker had already pointed out. At the point of emergence from the coccygeal canal, the stratum of radiating cells and fibres gradually becomes thicker as far as the origin of the tenth spinal nerve. The prolongations of the nerve cells are continuous with those of the epithelial cells. Upon the lateral and anterior faces of the *filum terminale* at this point, the multipolar cells approach each other, and admit in the narrow intervals between them longitudinal fibres, to which they at length give place. The authors compare the results of their labors with former works on the same subject with reference to man and the frog, and conclude that the *filum terminale* of the adult frog resembles the human spinal cord checked in its development, so that each segment of the *filum* represents one of the successive phases through which the human cord passes in its primary formation.

The second part of the memoir has reference to the experiments which the authors made to determine the corresponding cutaneous and medullary regions (*territoires*) of the spinal nerves of the frog; a subject already handled by Peyer, Türk, Krause, Eckhardt, and Koschennikoff. The results agree more or less with those of the last-named author. They prove further that there is no root presiding exclusively over the perceptive (*consciente*) sensibility, and that the cutaneous region, the irritation of which provokes a perceptive sensibility, is for each nerve the same as that which can produce a reflex action; an observation which is opposed to Marshall Hall's hypothesis regarding the excito-motory fibres.

Passing to the medullary region of the posterior roots of the frog, the authors admit that all the fibres for perceptive sensations ought to end, directly or indirectly, in the brain; but there are centres, especially at each root, which regulate the reflex movements. Their results, as regards the position of the centres of reflex action, agree on the whole with those of M. Koschennikoff, but in detail they present marked differences, which the authors explain by the inconstancy both of the cutaneous regions and of the points of emergence of the roots. To avoid as far as possible the diminution of irritability consequent on so serious an operation as opening the vertebral canal, they made each experiment upon an uninjured frog, by a single cut, and then tested the persistence of the reflex excitability. An autopsy was

subsequently made, and the distance measured between the cut and the emergence of the root. This last was rendered more visible by coloring the fibres with hyperosmic acid. We will not enter upon a description of the results obtained, but content ourselves with observing that there is a series of successive centres. The centre of each root commences immediately behind the preceding root, and ends immediately behind its own origin, being therefore upon a transversal line which joins the points of emergence. Behind the tenth pair the cord is not the seat of a reflex centre. The nerve cells of this portion send out sensitive and motor fibres towards the tenth pair, but the cells of these fibres do not communicate amongst themselves, as they would of necessity do if the reflex movements, which fail at this point, were present.

After these preliminary studies, the memoir treats of the anatomical and physiological researches, made by the authors, on the reproduction of the spinal cord in the frog. Schwann, from whose report on this memoir we have compiled this abstract, was the first who verified the reproduction of the nerve trunks in the frog; the reproduction of the cord had never been clearly proved by anatomical or physiological researches. Recently, M. Voit has shown that in pigeons, the hemispheres of the brain can be reproduced after extirpation. According to the authors, the want of success of the experiments upon the reproduction of the cord in frogs probably proceeds from the season, and the too great age of the animals. They have operated on little frogs full of life, and those experiments only which were made during the winter (that is from November to the end of February) were successful. The authors were not content with simply cutting through the cord, but they actually removed sections from one to two millimetres in length. After about six months the healing was complete, and all the functions had returned. These latter came back in the following order:—First, the spontaneous fibrillary movements in the thighs, then voluntary movement of the whole of the thigh, extending gradually to the knee and the foot. The perceptive (*consciente*) sensibility only appeared more slowly, and sensibility and the power of reflex motion were the last to present themselves. The autopsy and the microscopical examination of the reproduced cord showed that the end of the cord in front of the section was a little swollen, as in the case of nerves that have been divided; the posterior end was rounded, and between the two ends there was a substance, at first gelatinous, in which they found multipolar nerve cells, and nerve fibres in the form of Remak's fibres and varicose fibres. The cells appeared before the fibres. They found besides in this gelatinous mass, and in the two ends of the cord, near the point of section, nerve cells in a state of pigmentary degeneration.

Such are the principal results of this interesting work. It fills up a gap which existed in our knowledge of the reproduction of nerve tissue, and closes the list of numerous new observations upon the anatomy and physiology of the cord and spinal nerves of the frog.—*Med. Times & Gazette.*

ON A CHANGE IN THE URINE FROM THE EXTERNAL USE OF CARBOLIC ACID.*

By Augustus Almen.

In a former part of this journal, page 105, Mr. Waldenström has given an account of an altered appearance of the urine, &c., observed in some patients at the Academical Hospital, who were using a solution of carbolic acid in oil, either in dressing, or as an injection into abscesses, and he called particular attention to the danger of the occurrence of nephritis, and to the necessity for examining the urine during the employment of carbolic acid.

Although I have only a few very unimportant observations to make, which should most fitly be taken in common with the paper just referred to, yet, considering the practical importance of the inquiry, and the extremely unusual appearance the urine presented, I will say a few words on the method of determining the presence of carbolic acid in the urine.

The urine of various patients admitted to the hospital, had, after the use of the acid in question, a very dark, almost black, tar-like appearance. It was acid in re-action, turbid, and did not throw down any unusual deposit. The urine contained albumen, but not in any great or extraordinary quantity, in fact only to an insignificant amount. Blood could not be detected,† and the urine

* Translated from the "Upsala Läkareförenings Förhandlingar" (vol. v. part iii. p. 253), by J. W. Moore, M.B., Ch.M. Dub., L.K.Q.C.P. Ex. Schol. T.C.D.

† The most delicate, simplest, best, and a really practical test of the presence of blood in the urine, is that mentioned by me at the meeting of Naturalists in Stockholm, 1865 ("Proceedings of the Meeting, Stockholm 1865," p. 481), viz., the guaiacum test, which is most readily carried out in the following way:—Tincture of guaiacum (a solution in spirit of guaiac resin), and ordinary

did not present anything unusual except its black tar-like color, and a peculiar smell. When no absolutely certain re-action of carbolic acid could be obtained, either with the urine itself or with the residuum after the ether, with which the strongly acidulated urine had been agitated, though the presence of carbolic acid was highly probable from the smell of the fluid, about 400 cubic centimetres (some 14 ounces) of the urine was strongly acidulated with sulphuric acid, and about a third part was distilled from an ordinary retort, with glass cendensing tubes. The distillate was as clear as water, colorless, smelt strongly of carbolic acid, and gave beautiful and undoubted re-actions of the same. For comparison, an analysis was instituted at the same time with distilled water, in which some drops of carbolic acid had been dissolved by agitation.

The distillate and the aqueous solution of carbolic acid, when mixed with some ammonia, and, subsequently, chlorinated lime, assumed the same pronounced and beautiful blue color. Very thin chips of firwood (spruce fir), thoroughly soaked in the two liquids, and afterwards dipped into dilute-hydrochloric acid, and exposed to the sunlight, became with both mixtures beautifully blue, especially at their thinnest edges. The distillate, agitated with ether, and the clear ether evaporated in a watch-glass, left as a residuum oil-drops, smelling strong of carbolic acid, which, when mixed with water, and also when treated in other ways, for example with strong nitric acid, behaved like carbolic acid; although on treating them with concentrated sulphuric acid, then neutralizing with chalk and filtering, I was not fortunate enough to obtain with per-chloride of iron the beautiful violet color which is, without difficulty, got in the case of pure carbolic acid.

No doubt as to the presence of carbolic acid in this urine remained, and that its amount was not trifling, I conclude from the fact that the small quantity of urine which was subjected to distillation, afforded a distillate of which a small part, agitated with ether, left a not inconsiderable oily residuum. Although I have not instituted any comparative experiments with normal urine, I yet take it for granted that it does not contain carbolic acid in any such quantity as was the case in the present instance.

The unusual tar-like appearance of the urine naturally cannot depend on the presence in it of carbolic acid, and as urine so affected is not observed during the internal use of this substance, Mr. Waldenström's presumption, that it results from the presence of oxidized products of carbolic acid, formed even before the absorption of the acid, seems a very probable one. As is well known, carbolic acid and creosote have a great tendency to change; even when kept in well closed glass bottles they become tinged with a more or less reddish-brown color, and carbolic acid dissolved in water when treated with chromic acid (or with $K\ O^2\ Cr\ O_3 + S0_3$) turns to a dark brown, not unlike the urine under discussion. It seems not improbable that the carbolic acid mixed with blood and pus should, on exposure to the air, and, perhaps, through the properties possessed by the blood of ozonifying and promoting acidulation, undergo a rapid and energetic acidulation with the formation of the dark products of oxidation, which, afterwards, along with the unaltered carbolic acid, are absorbed, and pass off in the urine. At an hospital an experiment could easily be instituted as to whether a little carbolic acid, mixed with similar pus, and agitated with exposure to the air, after some time assumes a dark, tar-like appearance. That the dark color is not developed after the water is passed, or while it is in the bladder, seems to me likely, from the fact that, if the urine is agitated with a little carbolic acid, and exposed, without shelter, to the air, neither its reaction nor its appearance is changed (it does not putrefy), and a smaller quantity of urine evaporates even without undergoing any noticeable alterations.

Sharing Mr. Waldenström's view, that a dangerous nephritis might possibly arise from the external use of carbolic acid, I yet

turpentine in about equal parts, or from half to one cubic centimetre of each, are blended into an emulsion in a test-tube, after which, a small quantity of urine is added in such a way as to sink to the bottom in a separate layer. Whether the urine is normal or unhealthy, for example, containing albumen, but not blood, the emulsion undergoes no change until a rather long interval, but if the least blood is present in the urine, or if a drop of blood be added to it, the emulsion immediately on mixing with the urine becomes of a light-blue color, then darker, and finally the blue resembles a solution of indigo or Prussian blue, these changes varying in rapidity and intensity, according to the quantity of blood present. Many years' employment of this simple test has convinced me of not only its incredible delicacy, but also of its reliability. Neither normal nor ordinary albuminous urine, if free from blood, changes the guaiaco-turpentine emulsion at all in such a way that any doubt or uncertainty can arise as to whether blood is present or not; and this test for blood is for clinical purposes (not for medico-legal) simpler and far better than all others. How Terichman's blood-crystals may be obtained from urine and other fluids containing blood is mentioned in the same Proceedings, at page 482.

do not believe that we should therefore abstain from a judicious employment of it. The acid in question possesses, as is well known, unusual antiseptic properties, even when used in extremely minute quantity, and therefore I cannot imagine any advantage that is likely to accrue from employing it in so large an amount, and in such concentrated solutions as physicians appear to prefer. In my opinion its good effect depends less on the quantity of the acid than on a complete and general contact with the pus, and, doubtless, quite as good results might be obtained with much less acid. On the dressing a more dilute solution in oil should be the best, but for injection an aqueous solution appears to me the more serviceable, if it is brought into contact with the interior of abscesses, an end which is most readily attained by an injection of a large quantity of an aqueous solution of carbolic acid, which should subsequently be rinsed or squeezed out. Experiments with this solution, or even better with a solution in spirit, of which various quantities, according to various cases, may be added to the water used in washing, and to an injection fluid, would be of advantage.

From what is already known of the action of carbolic acid on the kidneys, it is then always our duty not to omit an examination of the urine for albumen, during even the external use of this substance, and this, too, even if the urine does not present any abnormal appearance.—*Med. Press and Circular.*

Medical and Surgical Journal.

BOSTON: THURSDAY, DECEMBER 15, 1870.

IN MEMORY OF THOSE WHO DIED FOR THEIR COUNTRY.

IT is a sad, but interesting record, which Dr. Toner, of Washington, D. C., gives us, in the October number of the *National Medical Journal*, of those physicians, now deceased, who served their country professionally, in the army and navy, in the War of the Rebellion. Before publication, the list was submitted to the Surgeon-General U.S.A., and the Chief of Medicine and Surgery U.S.N., and we may be sure it is as complete as such a list can well be on its first issue. It contains an amount of infeomation of the greatest value to the physician and the historian, and reflects the highest credit on its compiler.

We have learned to read with grateful respect the names of thousands in every grade of the service who gave up their lives for the furtherance of plans which only Omniscience could conceive and Omnipotence only could execute; which we feel to be still incomplete, but will be carried to their full development in the coming centuries. As members of the medical profession, however, we linger with warm regard over the record of *our own* men; who left us—with their lives in their hands—to bind up the wounds of their fellows, to brave contagion and malaria, and to undergo exposures, which each one knew might fix the seeds of disease of a necessarily fatal character; and all this with that devotion to humanity and to duty which makes a true physician's path a clear one. It is, then, with especial interest we of New England recall the forms, as we read the names of Bell and Fox, Davis and McLellan, of Revere and Sargent and Ware, Bryant, Hayward, Foster, Page, Gibson and a score of others. It was said of one of these by his fellow-prisoners in Richmond—but it might have been said of each one—"when he came, sunshine came with him, and when he went away darkness followed." "Killed in action," or "in the line of his duty," "died in rebel prison," or "of disease contracted in the service," these are the records which oftenest appear in our medical necrology of the war; honorable records, indeed, which it becomes us to emulate, as well as admire.

It is not in a spirit of fault-finding that we mention the occurrence of some omissions and some slight errors in Dr. Toner's list. Only to those who have undertaken such a list can the difficulties of the work be known. The preparation of a roll of honor is indeed like that of a dictionary of a new language. The omission of a name or a false date constitutes an error, and such errors are only to be overcome by successive editions. Our own experience in a work of a similar character has given us convincing proof of the liability to similar mistakes.

BURNING THE BODIES OF THE DEAD.

The Franco-Prussian war has given origin to a considerable number of inventions and innovations whereby former methods of warfare are doubtless improved upon, if, in such matters, anything can be deemed an improvement which has for its object the wholesale destruction of human life. Not the least interesting of the subjects suggested by the war is the disposition of the multitude of dead bodies left on the field of battle after a general engagement. The medical profession in Paris manifests an inclination to restore the ancient custom of burning the dead, as tending to prevent the evils of decomposition and other obvious or remote results. A recent number of the *Gazette Hebdomadaire* contains an editorial of considerable length devoted to a learned discussion of the subject in its historical and hygienic bearings. The Editor remarks:—"On its moral side the question is not open to controversy; it is to be determined by each individual concerned. For ourselves, in view of the great hygienic conditions involved, we should not hesitate to favor the burning of dead bodies. But it ought to be known if this innovation upon conventional forms is more useful or practicable than burial with the employment of disinfectant measures. The mode of burning is the real question to be determined."

With regard to the purpose of such a rite among the ancients with whom it was a custom, the Editor finds no evidence that it was suggested as a prophylactic measure in the interest of the public health. With the Greeks and Romans, who were the earliest, except the people of India, to practise it, the burning of the dead, both in civil and military life, was designed as a measure to prevent profanation; it was in some degree an honor or courtesy, derived so slightly from hygienic considerations that not infrequently funeral piles were built to departed spirits. Burial was still the essential rite, without which disembodied souls were condemned to wander miserably a hundred years. But, however slight the evidence may be that the measure was originally dictated in deference to public hygiene, the writer concludes that its value in this respect must have suggested itself "in the presence of the piles of dead bodies left on the battle-field, and generally accumulated in a small extent of territory."

Physicians as Witnesses and Experts.—Our brethren in California are justly indignant at the laws of their Commonwealth, which prescribe that "no witness in a criminal case shall receive any fee, whether a common or skilled witness, unless he takes oath that he is poor and unable to pay his expenses incurred in attending court." A subpœna to testify before the coroner or a justice of the peace, and in the courts, in any capacity, no matter under what expense or loss of time, gives no assurance of even the paltry pittance which is meted out to members of the profession at the East. A skilful expert is also obliged to give his time and experience, by attendance as a kind of supernumerary juryman; to listen to the evidence given, and then give his opinion in the case—and all this with no pecuniary recompense. This course of law is, to say the least, annoying, and should call for decided action by our brethren on the Pacific slope. It has, very wisely, been referred by the State Medical Society to a special committee, with a view to reforming the abuse.

Mr. Editor,—Who has the merit of ordaining that your valuable Journal be distributed with the leaves cut? It is a blessed institution—that operation of resection—at all events. Would that other periodicals might go and do the like-wise thing!

Yours truly, M. M. S. S.

Our "devil," to whom is deputed the duty of cutting the leaves of our exchanges, says "Amen!"—Editor.

Gun-Shot Wound of the Abdomen—Recovery. By W. E. Whitehead, M.D., Assistant Surgeon U.S.A.—J. B., born in Indiana, resident of Washington Territory, farmer, white, single, aged 17½ years, was accidentally shot September 2d, 1868 (A.M.), in carelessly withdrawing a loaded double-barrelled gun, with the muzzle toward his body, from a clump of bushes, where he had placed it for security. The gun was charged with a round, one-ounce

leaden ball and a charge of No. 4 shot in each barrel; the ball was wadded with a cotton rag. The charge entered his body four and a half inches from the median line, and six and three-quarter inches from the superior spinous process of the ilium of the left side; the lower edge of the eighth rib was shattered; the ends of the ninth, tenth, eleventh and twelfth ribs were cut off entirely. Most of the charge passed out four inches from the spine, on the same side. After receiving the wound he walked several rods, sat down and waited half an hour for a wagon to arrive to take him home, a distance of five miles, and got into the wagon and rode home. He bled very freely till next day. No perforations of the intestines were manifested for a week, when the sharp, ragged ends of the ribs cut into the intestines, making in all seven or eight openings, through which fæces passed. For the first week or ten days he was not seen by a physician, and only once after, till he came under my notice three months from the date of the injury.

When first called to see him, about the middle of the month of December, 1868, I found him much reduced in flesh, with a free discharge of healthy pus from seven or eight fistulous openings at the seat of the injury; appetite fair; sleeps pretty well; bowels moved per anum every two or three days; considerable quantities of fluid fæces pass out at the openings. In February, he had a troublesome and painful cough, with shortness of breath and fever, which lasted for about six weeks—the result of a lobular pneumonia of the lower lobe of the left lung. From the time of the injury to the date when first seen by me, nearly a handful of small pieces of bone had been discharged from the wound, as also shots, rag, and a piece of flannel shirt. The urine was dark-colored during his entire illness, but was always passed freely. Treatment up to December had been such as was ordered by a hospital steward of the army: recumbent position with rest, cold-water dressings, cleanliness, and sol. potass. permang., as a disinfectant, with wine and morphia to allay pain. I only varied this plan of treatment by ordering a dressing of simple cerate, or mutton tallow, to diminish the quantity of anodyne daily, and a diet of good nourishing and easily digested food, with ale, brandy, or wine, as required.

When last seen—the latter part of the month of April, 1869—his condition was very much improved. He had gained flesh and strength; slept pretty well; only a small quantity of the most liquid of the fæces passed occasionally from the larger of the three remaining fistulous openings just below the eighth rib; he was able to walk about.

I consider this a most remarkable recovery, in view of the extent of the injury (nearly four square inches of the parietes of the abdomen having been shot away), the surgical, or rather the want of surgical advice and proper treatment; and can alone attribute it to his youth, good constitution, judicious and careful nursing of a devoted mother, and healthfulness of his surroundings, for his residence was upon the very shore of the Pacific Ocean, a few miles north of the Columbia River.—*Pacific Med. and Surg. Journal.*

Case of Complete Transposition of the Viscera. Reported by R. Burgess, M.D., Assistant Physician to the City Hospital, Saint Louis.—M. C., æt. 40, a native of Ireland, was admitted to the City Hospital August 15, 1870. He was suffering from entero-colitis, following upon alcoholism. On the 22d, he died, and, there being some obscurity in regard to the case, I made a *post-mortem* examination on the same day, and discovered that there was a complete transposition of the viscera.

The man was well formed, limbs symmetrical, height five feet three inches, breadth of shoulders sixteen inches, of hips thirteen inches, weight about 180 lbs., hair brown, beard black and short.

On laying open the abdominal and thoracic cavities, the organs presented the following appearances. The heart was upon the right side, with the apex pointing downward, forward, and to the right. The liver, being much enlarged, extended entirely across the abdominal cavity, touching the floating ribs at each side; but the larger lobe lay in the left hypochondriac region. The gall-bladder was also on the left side, two inches from the median line. The exposed portion of the stomach was seen to the right, just below the smaller right lobe of the liver. Hanging from the greater curvature of the stomach was the great omentum, much diminished in size, and covering a small triangular space formed by two portions of the colon. The colon lay altogether in the right half of the abdominal cavity, and presented on the surface two portions lying nearly vertically, attached to each other below, but diverging towards the upper part, the whole presenting a figure resembling the letter Y.

The left half of the abdominal cavity was wholly occupied by the small intestines.

Having viewed the organs as first exposed, I proceeded to dissect them. The portion of large intestine lying vertically just to the right of the median line proved to be the ascending colon, the caput resting upon the bladder. After tying the ileum at its entrance into the caput, the small intestines were removed, and were found to be attached to the vertebral column by a mesentery of the usual length. The duodenum, however, was found lying in an unusual situation. Beginning at the pylorus, which lay exactly in the median line of the body, it extended to the left a distance of three inches, being attached to the under surface of the lobus quadratus and gall-bladder. Then recurving upon itself two and a half inches, it was attached to the ascending colon at its posterior part. The course then lay backward and downward close to the vertebral column, and attached to it, for a distance of four inches. The intestine (now the jejunum) next took its course vertically upward a distance of five inches, and was attached to the first portion of the duodenum, near the gall-bladder. Then passing backward to the under surface of the liver, it coiled upon itself several times, and finally passed outward directly in front of the left kidney. The intestine to this point was without mesentery, and mostly without peritoneal covering, being attached closely to itself and surrounding organs by connective tissue.

The large intestine was next examined. Beginning at the caput cœcum coli, which rested upon the bladder, the ascending colon passed vertically upward just to the right of the median line of the body till it reached the lobus quadratus, to which it was firmly attached by a bridge of tissue covering the first portion of the duodenum. It then passed backward and outward, lying below the stomach and spleen. Then descending along the right lateral wall of the abdomen, it reached the right inguinal region, where it made a turn and was attached to the beginning of the ascending colon. Then ascending again, it formed the outer vertical portion of the colon. After reaching the height of the stomach a second time, it made another turn and descended along the right side of the vertebral column, and into the pelvis, forming the rectum.

The remaining organs of the body were examined, and the transposition was found to be complete. The heart was on the right side, the apex pointing to the right. The left side of the heart circulated the blood to the lungs, while the right side controlled the systemic circulation. The arch of the aorta curved from left to right, and the aorta itself descended upon the right side of the vertebral column. The ascending vena cava lay upon the left side of the vertebral column. The right common iliac vein crossed beneath the left common iliac artery, and lay to the inner side of the right common iliac artery. The left common iliac vein lay to the outer side of the left common iliac artery. The left lung was larger than the right, and had three lobes; the right lung had but two lobes. The diaphragm rose higher on the left side than on the right. The openings of the diaphragm were transposed, those for the aorta and œsophagus being to the right of the median line of the body, and that for the vena cava to the left. The stomach and its greater extremity lay towards the right side. The spleen was about half the normal size, and was situated in the extreme right hypochondriac region. The liver was hypertrophied but symmetrical, and lay with its greater extremity on the left side. The gall-bladder was to the left of the median line. The right kidney was higher than the left, and even the right testicle hung lower than the left.—*St. Louis Medical and Surgical Journal.*

Malpractice Suits in Turkey.—Turkey must be a pleasant place to practise medicine in—more especially as regards the military service. Charges of malpractice are settled by courts-martial there; and if they escape the testimony of surgical experts with microscopical eyes and analytical fingers, they do not seem, on the other hand, to trouble themselves about any pathological evidence at all.

The *Gazette Médicale d' Orient* relates the following episode in point:—A soldier having received a severe contusion in the end of one of his fingers, a physician and surgeon attached to the army, after at first endeavoring by co-aptation of the parts to preserve the member, were forced, by the occurrence of sphacelation, to amputate the phalanx involved. Shortly after this trifling operation, tetanus supervened, and the patient died. Thereupon the medical attendants are at once put in jail, and a mixed commission of military and medical men convened for their trial, the summary result whereof is, that their case calls for the enforcement of "Article 187 of the Penal Code," which decrees from six months to

two years' imprisonment to any practitioner whose negligence is followed by his patient's death. Appeal is made to the Minister of War, who refers the matter to the Superior Medical Council of the Army, which body exonerates the prisoners from all blame; but, in spite of this, the "Dari-Choura" (whatever or whoever that may be) confirms the first sentence. And now the Imperial Society of Medicine of Constantinople humbly petitions His Highness the Grand Vizier, that he will permit the revision of the case by the High Court of Justice. Meanwhile, the unfortunate physician and surgeon remain in prison.—*N. Y. Medical Gazette.*

Hydrocele in a Female. Ey E. P. Bennett, M.D., Danbury, Conn.—Hydrocele in females is of such rare occurrence that most authors on surgery fail even to make mention of it, and many physicians claim that it never exists, and in an extensive practice of over forty years but one single case has come under my observation. This case occurred recently in a young married female residing in Putnam county, and was mistaken by a surgeon of some eminence for a case of inguinal hernia, who endeavored to reduce it, but failing to do so, pronounced it adherent and irreducible, and advised to let it alone. That such a mistake should have been made is not at all surprising, as it was a hydrocele of the round ligament, coming down through the inguinal canal, and occupying exactly the place of inguinal hernia, and closely resembling one. She subsequently came under my care, and upon inquiry I learned that about five years since a small tumor had made its appearance, which had slowly and steadily increased until it had attained its present size, which was about that of a turkey's egg. It had not been painful, was not attended with abdominal disturbance, had never receded when decumbent, and gave to the touch a feeling of fluid contents, instead of the doughy feel of hernia, and I therefore thought that, whatever it might be, it was not hernia; and upon a closer inspection I diagnosticated hydrocele of the round ligament, although it was not diaphonous. So sure was I of a correct diagnosis, that I at once proposed an operation, to which she readily consented; and with the aid of a professional brother, who coincided with me in my diagnosis, I proceeded to cautiously lay open the sac, when we found to our great satisfaction that we had not blundered in our opinion. The serous contents of the sac having been evacuated, I injected it with a saturated tincture of iodine, and she speedily recovered, without the supervention of a single unpleasant symptom.—*Med. Record.*

Treatment of Gonorrhœa with Tannin and Glycerine.—Dr. Schuster states that tannin with glycerine at first forms a soft waxy substance, which soon becomes hard and brown, and melts in a moist atmosphere at the temperature of the body. Dr. Schuster has formed small pencils of this compound, which he inserts into the urethra of patients suffering from gonorrhœa. He has found the treatment by means of caustic injections (the abortive method) frequently to fail, and that it occasionally produces violent pain, inflammation, and hæmorrhage. On the other hand, the treatment with slightly astringent solutions cures the gonorrhœa within a period varying from four to seven weeks, but is often followed by a troublesome gleet. The tannin-glycerine rods employed by Dr. Schuster are from three to four inches in length, well rounded at the extremities, and consist of thirty grains of tannin, one grain of powdered opium, and a sufficient quantity of glycerine to form a pastille. These rods are hard in winter, and soft in summer. Before their introduction, they should be dipped in warm water. They are to be left for from five to ten minutes in the urethra, and then withdrawn. If, however, they be left in for an hour, or for a night, more or less pain is caused, and this appears to be due to a combination occurring between the tannin and the mucus or pus, which becomes hard, and acts like a foreign body. Dr. Schuster has had no case of orchitis following the use of these pencils, though he has thought it advisable to recommend the employment of a suspensory bandage, nor has he noticed any irritation of the bladder or prostate. In cases of gleet a rod may be left in for a few minutes, and speedy cure usually results.—*Lancet*, Oct. 8, 1870.

Death from Chloroform.—O. K. Grant, of Brunswick, Maine, about 40 years of age, and of late a clerk in the Census Bureau in Washington, died suddenly Monday, from the effects of chloroform, which had been administered by Dr. ——, one of the ablest surgeons in that town, preparatory to an examination.

Medical Miscellany.

Annual Meeting of the Massachusetts Medical Benevolent Society.—The Society met at the house of the President, Dr. Shattuck, at 8, P.M., November 10th. The following were elected officers of the Society for the ensuing year:—President, Dr. G. C. Shattuck. Vice President, Dr. H. W. Williams. Treasurer, Dr. Francis Minot. Secretary, Dr. Hall Curtis. Trustees, Drs. W. W. Wellington, Cambridgeport; Charles E. Buckingham, Boston; Geo. H. Lyman, Boston; S. W. Salisbury, Brookline; W. W. Morland, Boston; Luther Parks, Boston; R. L. Hodgdon, Arlington; Henry J. Bigelow, Boston; B. E. Cotting, Boston. The Society then adjourned to partake of an elegant entertainment offered by its President. A number of invited guests were present, including gentlemen of the other professions.

Detection of the Adulteration of Quinine with Salicine.—Dr. Solenén, says the *American Chemical News*, has comparatively tested the degree of accuracy and sensitiveness of the different tests in use for the detection of the presence of salicine in quinine, which, if made with the view of fraudulent adulteration, will always be at least at the rate of one per cent. of salicine or more, because less will not pay. The author employed three kinds of sulphuric acid—viz.: the fuming, pure concentrated acid, free from arsenic and nitric acid; ordinary concentrated sulphuric acid of commerce, containing a trace of nitric acid; and, lastly, sulphuric acid to which, purposely, nitric acid had been added. A watch-glass having been placed on a sheet of white paper, and a drop or two of the acids above referred to (each in a separate glass) having been poured therein, a few crystals of the alkaloid (sulphate of quinine) were put on the acid; if pure, there is no coloration, but, even with 1-100th of salicine, the two first-named acids caused a distinct red coloration, which did not ensue with the acid containing nitric acid. This latter acid was not even colored by pure salicine.—*Medical and Surgical Reporter.*

Bayard Taylor on Quacks.—"I am not blood-thirsty, but I should feel little grief if the Indians were to pounce upon and carry off, beyond the reach of rescue, every agent of quackery who defaces the finest scenery of the road. Cannot the two great railroad companies prevent this outrage? At the Sherman Summit, along Green River, in Echo and Weber Canons, in the Humboldt Palisades—wherever there are noble masses of rock—you find them painted with the unclean shibboleth of the quack. Heaven forbid that I should mention *whose* bitters, or lotion, or dentifrices, thus proclaim the vulgarity of its advertiser; but I have vowed never to use any such bitters, or lotion, or dentifrices, and I advise all overland travellers to do the same. The sight of this vile defacement—which no other country in the world would tolerate for a day—was the only disagreeable circumstance of my journey to and fro.—*Pacific Med. and Surg. Journal.*

Bad Effects of Chloral.—A patient in Guy's Hospital, with aneurism of the thoracic aorta, being given half a drachm of chloral to allay pain and procure sleep, became unconscious immediately on the administration of the dose, with lividity and coldness of face and hands, and respiration only at long intervals, death seeming imminent for five hours. These symptoms passed off during the following day. In commenting on the case, Dr. Habershon remarked that it confirmed the opinion he had formed from observation of cases of pneumonia and bronchitis; viz., that chloral tends to cause bronchial and pulmonary congestion, through its action on the pneumogastric nerve, and that it should not be given where embarrassment to respiration is liable to occur.—*N. Y. Medical Gazette.*

To Correspondents.—Communications accepted:—Boston City Hospital Reports.—Discharge of Gallstones at the Umbilicus, with Dissection.

Pamphlets Received.—Twelfth Report to the Legislature of Vermont, relating to the Registry and Returns of Births, Marriages and Deaths, in the State, for the year ending Dec. 31, 1868. Pp. 134. (From Dr. L. C. Butler.)—A Contribution to the Medical History of New Hampshire. By A. B. Crosby, A.M., M.D., Prof. of Surgery in Dartmouth Medical College, &c. Pp. 32.

Married,—In this city, 8th inst., Dr. Z. B. Adams, of Framingham, to Miss Frances A. Kidder, of Boston.—At Lynn, 7th inst., J. H. Foster, M.D., of Chicago, Ill., to Mrs. Elizabeth A. Jewett, of Lynn.

Deaths in seventeen Cities and Towns of Massachusetts for the week ending Dec. 10, 1870.

Cities and Towns.	*No. of Deaths.*
Boston	95
Charlestown	10
Worcester	12
Lowell	12
Milford	4
Chelsea	5
Cambridge	11
Salem	1
Lawrence	6
Lynn	5
Gloucester	3
Fitchburg	1
Taunton	3
Newburyport	6
Fall River	11
Haverhill	4
Holyoke	6
	195

Prevalent Diseases.	
Consumption	47
Pneumonia	14
Croup and Diphtheria	13
Typhoid fever	6
Scarlet fever	6

Holyoke reports three deaths from smallpox during the past two weeks.

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending Saturday, Dec. 10th, 95. Males, 53; females, 42. Asthma, 1—bronchitis, 1—disease of the brain, 3—cancer, 2—consumption, 20—convulsions, 4—croup, 2—debility, 7—diarrhœa, 1—dropsy, 1—dropsy of brain, 2—"malignant fever," 1—scarlet fever, 4—typhoid fever, 1—intermittent fever, 1—gastritis, 1—disease of heart, 4—hernia, 1—intemperance, 1—intussusception, 1—disease of the kidneys, 1—disease of the liver, 2—congestion of the lungs, 3—inflammation of the lungs, 5—marasmus, 4—old age, 1—paralysis, 2—peritonitis, 2—puerperal disease, 3—purpura, 1—enlarged prostate, 1—rheumatism, 1—unknown, 6—whooping cough, 4.

Under 5 years of age, 32—between 5 and 20 years, 6—between 20 and 40 years, 22—between 40 and 60 years, 19—above 60 years, 16. Born in the United States, 61—Ireland, 29—other places, 5.